

REMARKS

Claims 1-2, 4-10, 12-18 and 20-27 are pending. Claims 1-2, 4-10, 12-18 and 20-27 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,711,691 (Howard). Claims 1, 9 and 17 are herein amended to overcome the rejection.

No new matter is added by the amendments to the claims submitted herein, since the original application provides support. See present application, as published, paragraph 14 (accessing a memory of the data processing system via a bus by respective processors of the data processing system, wherein the accessing is through a memory controller intervening between the processors and the memory and providing each processor substantially equal access to the memory, such that memory access time may be substantially independent of the respective processors); paragraph 19 (a policy manager module of the operating system providing a programmable setting enabling a user to specify, as a predetermined performance criterion, a minimum performance required to be delivered by the data processing system); paragraph 25 (monitoring of the workload of the data processing system includes triggering workload monitoring responsive to an asynchronous event tending to indicate a change in workload, wherein the asynchronous event includes a change in availability of transaction buffers of the data processing system); paragraph 18 (determining a number processors by the policy manager module includes receiving workload information from the workload module, including a series of workload data points indicating respectively current processor cycles corresponding to loads of the data processing system at respective times in the series); paragraph 18 (determining a number processors by the policy manager module includes averaging the series of workload data points to smooth fluctuations in the workload data points); paragraph 18 and 26 (the determining of the number of processors is responsive to the averaged series of workload data points and the predetermined performance criterion); paragraph 20-21 (selecting a processor for activation or deactivation by a resource pool module of the operating system responsive to an increase or decrease of processors indicated by the policy manager, the increase or decrease indication being responsive to the determining of the number of processors by the policy manager module, and wherein the selecting a processor for activation or deactivation includes selecting a particular processor based on the particular processor's workload); and paragraph 20 (activating or

deactivating one or more processors is initiated by a power control module of the operating system responsive to the selecting by the resource pool module).

As the present application states:

In conventional SMP systems, processing activity is generally distributed approximately equally to each of the processors such that, at any given moment, each processor is handling about $1/N$ th of the workload where N is the number of processors in the system. In one embodiment of data processing system 100 according to the present invention, however, the workload may be asymmetrically distributed to the processors in the system to facilitate the removal of processors from the available resource pool during periods of reduced demand.

Published application, paragraph 21. Howard does not indicate that the system to which his teaching applies is an SMP system. An SMP system is one in which a memory of the data processing system is accessed via a bus by respective processors of the data processing system, and wherein the accessing is through a memory controller intervening between the processors and the memory and providing each processor substantially equal access to the memory, such that memory access time may be substantially independent of the respective processors. Present application, as published, paragraph 14. In order to more particularly point out this distinction, claims 1, 9 and 17 of the present application are amended herein to recite *accessing a memory of the data processing system via a bus by respective processors of the data processing system, wherein the accessing is through a memory controller intervening between the processors and the memory and providing each processor substantially equal access to the memory, such that memory access time may be substantially independent of the respective processors.*

Howard does not teach or suggest *a policy manager module or a resource pool module of the operating system*, nor that selecting a processor for activation or deactivation by the resource pool module is responsive to an increase or decrease of processors *indicated by the policy manager of the operating system* and responsive to determining the number of processors *by the policy manager module*, nor that selecting a processor for activation or deactivation includes the *resource pool module of the operating system* selecting a particular processor based on the particular processor's workload. Claims 1, 9 and 17 of the present application are amended herein in order particularly point out these differences.

The only mention of *averaging* by Howard is as follows:

Assume a simplistic example in which the workload is 1000 units of work that is waiting to be processed by the computer system. If only one processor is active, the workload of the one processor can be considered 1000 units. If a heavy workload is deemed anything over 600 units, then the power management processing 10 will operate to activate one or more additional processors. If one additional processor were to be activated 16, then the average workload for each of the two activated processors would drop to 500 units.

Howard, col. 4, lines 41-50.

This suggests a maximum workload objective of 500 units per active processor, but it does not teach or suggest *determining a number processors includes averaging a series of workload data points to smooth fluctuations in the workload data points*, nor does it teach or suggest *the determining of the number of processors is responsive to the averaged series of workload data points and a predetermined performance criterion*, as now recited claimed by claims 1, 9 and 17.

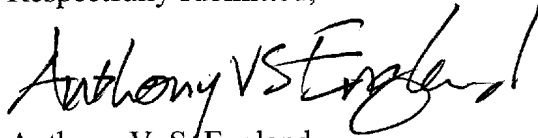
Howard does not teach or suggest that *a policy manager module of the operating system providing a programmable setting enabling a user to specify, as a predetermined performance criterion, a minimum performance required to be delivered by the data processing system*. The present application is herein amended in order to particularly point out this difference.

Howard does not teach or suggest that *monitoring of the workload of the data processing system includes triggering workload monitoring responsive to an asynchronous event tending to indicate a change in workload, wherein the asynchronous event includes a change in availability of transaction buffers of the data processing system*. Claims 1, 9 and 17 of the present application are amended herein in order to particularly point out this difference.

REQUESTED ACTION

For the above reasons, Applicant submits that claims 1, 9 and 17 are allowable. Further, claims 2, 4-8, 10, 12-16, 18 and 20-24 are allowable at least because they depend on respectively allowable independent claims. Applicant hereby requests that Examiner grant allowance and prompt passage of the application to issuance.

Respectfully submitted,

A handwritten signature in black ink, reading "Anthony V. S. England". The signature is fluid and cursive, with the first name "Anthony" being the most prominent.

Anthony V. S. England
Attorney for IBM Corporation
Registration No. 35,129
512-477-7165
a@aengland.com